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Some of the photos used in this document were provided by the William Hearn family, Sumter, South Carolina.

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7.0 GLOSSARY

Above Ground Level (AGL): Altitude expressed in feet measured above the ground surface.

Aerial Refueling Tracks (ARs): Aerial refueling operations are performed in designated aerial refueling tracks or FAA approved airspace.

Aerospace Expeditionary Force (AEF): An AEF is a group of different types of aircraft with a mix of capabilities suited to the tasking deployed overseas. There are ten AEFs in the Air Force, and consist of wings or squadrons from multiple United States bases, and may operate as a unit or be integrated with existing forces overseas.

Air Force Instruction (AFI): Air Force Instructions enforcing United States laws and regulations.

Air Combat Command (ACC): The Air Force Command that operates combat aircraft assigned to bases within the contiguous 48 states, except those assigned to Air National Guard and the Air Force Reserve Command.

Air Quality Control Region (AQCR): An administrative unit for monitoring and controlling air quality in a specific geographic area.

Air Traffic Control (ATC): The system used to safely direct aircraft in flight, using radar and controllers from both the Federal Aviation Administration and the military.

Air Traffic Control Assigned Airspace (ATCAA): ATCAA is airspace, often overlying a Military Operations Area, extending from 18,000 feet MSL to an altitude assigned by the FAA. ATCAAs are released to military users by the Federal Aviation Administration only for time they are to be used, allowing maximum access to the airspace by civilian aviation.

Candidate Species: A species for which the United States Fish and Wildlife Service has sufficient information regarding the biological vulnerability of and threat(s) to that species to warrant a proposal to reclassify it as threatened or endangered (Formerly Category 1 Candidate species).

Chaff: Chaff is the term for small fibers of aluminum-coated mica packed into approximately 150 gram bundles and ejected by aircraft as a self-defense measure to reflect hostile radar signals.

Council on Environmental Quality (CEQ): The Council is an Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Members are to be conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs of the nation; and to formulate and recommend national policies to promote the improvement of quality of the environment.

Day-Night Average Sound Level (DNL): Day-Night Average Sound Level is a noise metric combining the levels and durations of noise events and the number of events over an extended time period. It is a cumulative average computed over a 24-hour period to represent total noise exposure. DNL also accounts for more intrusive nighttime noise, adding a 10 dB penalty for sounds after 10:00 pm and before 7:00 am. Noise levels are calculated the same way for both DNL and DNL_{mr}.

Decibel (dB): A sound measurement unit.

Defensive Countermeasures: Coordination of maneuvers and use of aircraft defensive systems designed to negate enemy threats. Those maneuvers (which include climbing, descending, and turning) requiring sufficient airspace to avoid being targeted by threat systems. Aircraft use sophisticated electronic equipment to jam air and ground radar-tracking systems and dispense chaff and flares to confuse hostile radar and infrared sensors.

Endangered Species: The Endangered Species Act of 1973, defined the term “endangered species” to mean any species (including any subspecies of fish or wildlife or plants, and any distinct population segment of any species or vertebrate fish or wildlife which interbreeds when mature) that is in danger of extinction throughout all or a significant portion of its range

Environmental Justice: As defined by Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, review must be made as to whether an action disproportionately impacts minority and/or low-income populations.

Flight Level (FL): The Flight Level refers to the altitude above MSL. FL230, for example, is approximately 23,000 feet MSL.

Inert Ordnance: Ordnance without explosive or incendiary material. This inert (non-explosive) ordnance is used by training aircrews authorized to verify that aircraft systems are functioning properly, without the use of live ordnance. Inert ordnance is only used at authorized air-to-ground training ranges.

Instrument Flight Rules (IFR): A standard set of rules that all pilots, civilian and military, must follow when operating under flight conditions that are more stringent than visual flight rules. These conditions include operating an aircraft in clouds, operating above certain altitudes prescribed by Federal Aviation Administration regulations, and operating in some locations like major civilian airports. Air traffic control agencies ensure separation of all aircraft operating under IFR.

Instrument Landing Systems (ILS): An ILS is a precision instrument approach system which normally consists of the following electronic components and visual aids: a Localizer, which provides course guidance to the runway; a designated glide slope, which provides vertical guidance during approach and landing; an Outer Marker which is a marker beacon at or near the glide slope intercept altitude of the published ILS approach. This is normally four to seven miles from the runway threshold, along the runway’s extended centerline; a Middle Marker, which is a marker beacon along the glide slope at or near the point of decision height; and Approach Lighting conforming to FAA standards.

Onset-Rate Adjusted Monthly Day-Night Average Sound Level (DNL_{mr}): Onset Rate-Adjusted Monthly Day-Night Average Sound Level is the measure used for subsonic aircraft noise in military airspace (MOAs or Warnings Areas). This metric accounts for the fact that when military aircraft fly low and fast, the sound can rise from ambient to its maximum very quickly. Known as an onset-rate, this effect can make noise seem louder due to the added “startle” effect. Penalties of up to 11 dB are added to account for this onset-rate. (See DNL above).

Maximum Sound Level (L_{max}): Maximum Sound Level is used to define peak noise levels. L_{max} is the highest sound level measured during a single aircraft overflight. For an observer, the

noise level starts at the ambient noise level, rises up to the maximum level as the aircraft flies closest to the observer, and returns to the ambient level as the aircraft recedes into the distance.

Mean Sea Level (MSL): Altitude expressed in feet measured above average sea level.

Military Operations Area (MOA): Airspace below 18,000 feet MSL established to separate military activities from instrument flight rule traffic and to identify where these activities are conducted for the benefit of pilots using visual flight rules.

Military Training Route (MTR): A Military Training Route is a corridor of airspace with defined vertical and lateral dimensions established for conducting military flight training at airspeeds in excess of 250 nautical miles per hour.

Nautical Mile (nm): Equal to 1.14 statute miles.

National Environmental Policy Act (NEPA): The National Environmental Policy Act of 1969 directs federal agencies to take environmental factors into consideration in their decisions.

National Historic Preservation Act (NHPA): The NHPA of 1966, as amended, established a program for the preservation of historic properties throughout the United States.

Non-Parasitic Flare: This type of flare incorporates a mechanism to prevent ignition of the pellet in the case. It includes a push button and spring, a firing pin, and a primer assembly. When ignited by the firing pin, the primer assembly fires the ignition charge, which fires the output charge, which ignites the flare pellet. This type of flare is likely to produce the largest number of duds, albeit infrequently, and the most debris due to the complexity of the ignition process.

Ordnance: Any item carried by an aircraft for dropping or firing, including but not limited to, live or inert bombs, ammunition, air-to-air missiles, chaff, and flares.

Parasitic Flare: This type of flare is ignited in the aluminum case before it leaves the aircraft by holes in the piston that permit the ignitor gases to contact the first fire mixture on top of the flare pellet. Should ignition of the flare not occur, the flare would not be ejected from the aircraft. This type of flare is less likely than the Non-Parasitic flare to produce duds.

Restricted Areas: A restricted area is designated airspace that supports ground or flight activities that could be hazardous to non-participating aircraft.

Semi-Parasitic Flare: This type of flare has a two-stage ignition sequence where, typically, the first stage ignition occurs in the aluminum case before it leaves the aircraft, which ejects the flare pellet. Once the pellet is ejected, the first stage burn then ignites the Infrared (IR) decoy compound (second stage). This system is safer for combat aircrews than the Parasitic system. Should ignition of the flare not occur, the flare would not eject. This type of flare is also less likely than the Non-Parasitic flare to produce duds.

Sonic Boom: A sonic boom is the noise created when an object breaks the sound barrier.

Sortie: A sortie is a single flight, by one aircraft, from takeoff to landing.

Sortie-Operation: The use of one airspace unit (e.g., Military Operations Area or Warning Area) by one aircraft. The number of sortie-operations is used to quantify the number of uses by aircraft and to accurately measure potential impacts; e.g. noise, air quality, and safety impacts. A sortie-operation is not a measure of how long an aircraft uses an airspace unit, nor

does it indicate the number of aircraft in an airspace unit during a given period; it is a measurement for the number of times a single aircraft uses a particular airspace unit. In this EIS, it is also a measurement of the number of different missions or tactics conducted by an aircraft within an airspace block.

Sound Exposure Level (SEL): Sound Exposure Level (SEL) accounts for both the maximum sound level and the length of time a sound lasts. SEL does not directly represent the sound level heard at any given time. Rather, it provides a measure of the total sound exposure for an entire event averaged over 1 second.

State Historic Preservation Office (SHPO): State department responsible for assigning protected status for cultural and historic resources.

Threatened Species: A species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Traditional/Cultural Resource: Cultural and traditional resources are any prehistoric or historic district, site or building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, religious or other purposes.

Training Transmitter: Provides electronic signatures that simulate ground-based “enemy” radar systems, threaten pilots during training, and require pilots to take defensive actions for self-protection.

Visual Flight Rules (VFR): A standard set of rules that all pilots, both civilian and military, must follow when not operating under instrument flight rules. These rules require that pilots remain clear of clouds and avoid other aircraft. See instrument flight rules.

Visual Routes (VR): Routes used by military aircraft for conducting low-altitude, high speed navigation, and tactical training. These routes are flown under Visual Flight Rules.

Wetland, Jurisdictional: A jurisdictional wetland is a wetland that meets all three United States Army Corps of Engineers criteria for jurisdictional status: Appropriate hydrologic regime, hydric soils, and facultative to obligate wetland plant communities under normal growing conditions provided the wetland is connected to navigable waters of the United States.